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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/413,738	10/06/1999	KENNETH M. BUCKLAND	062891.0338	2364

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EXAMINER

LEE, TIMOTHY L

ART UNIT

PAPER NUMBER

2697

DATE MAILED: 03/24/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/413,738

Applicant(s)

BUCKLAND ET AL.

Examiner

Timothy Lee

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-30 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-2, 4-10, 12-17, 18-22, and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Naohiro (US 6,317,414).
3. Regarding claims 1, 8, 9, 13, 16, 23, and 24, Naohiro discloses a signal switching method and apparatus configured to operate in an ATM network (ATM network). See col. 5, lines 11-15, and also Fig. 1. From Fig. 1, it can be seen that the network contains a plurality of paths, VP1 and VP2, that end in a common destination (plurality of paths to a common destination). The signal 5-1 enters the network at Node 1. The node distributes identical copies down paths VP1 and VP2 (plurality of copies). Node 3 has detection sections 5-6 and 5-5, which receives traffic from VP2 and VP1, respectively (receiving ATM traffic from a traffic source, each one of the paths having a receive circuit). See also col. 6, lines 41-57. The selector 5-7 selects the virtual path input that will continue on to 5-8, so that only one qualified copy is switched and passed through the system. Figs. 4-9 support the fact only one qualified copy of traffic chosen to be sent through the ATM switch. For example, in Fig. 4, the signal originates in node 1-22 and its destination is node 9, where the selector is located. Nodes 2, 3, 4, 7, and 8 act as intermediary nodes, very similarly to how node 16 of Fig. 1 in the application acts as an intermediary node. After reaching the selector, only one qualified copy of traffic is allowed to

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continue to 1-27. As can be seen in Fig. 1, an ATM switch can be construed as being selector 5-7, and the switch only connects to one of the paths at a given time (configuring an ATM switch to provide a route to a common destination). See Fig. 1, and col. 6, lines 41-57. The selector chooses the correct virtual path by selecting a signal closer to normality out of the plurality of signals (determining a qualified copy of the traffic). See part (e) of claim 1. Naohiro does not expressly disclose discarding the copy of traffic that is not chosen. Bobey et al. discloses discarding the duplicate copy of traffic if it isn't as qualified as the other copy of traffic that arrives at a destination. See Fig. 1, and col. 5, lines 10-28. It would have been obvious to a person of ordinary skill in the art at the time of the invention to discard the unqualified copy of traffic. One would have been motivated to do this because something must happen to the copy of traffic that doesn't continue to be transferred. One way of disposing of it is to switch to it and discarding it.

4. Regarding claim 9, it would have been obvious to have the AIS detecting sections act as receive circuits, where the receive circuits communicate determine if an AIS signal has been received and discard the an unqualified copy of traffic in way that Bobey et al. discloses discarding a packet. One of ordinary skill in the art would have been motivated to do this for the same reasons as stated above—the system must deal with the unqualified copy of traffic somehow, so discarding it seems like a logical solution.

5. Regarding claim 16, if the unqualified packet is discarded as mentioned previously, then only the qualified copy will reach the switch.

6. Regarding claims 2, 4, 10, 14, 17, 19, 25, 27 and 29, Naohiro discloses that an Alarm Indicating Signal can be inserted into the virtual path to indicate if a failure occurs, and this

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information can be used by the detecting sections to determine which path is selected (determining comprises receiving management cells on a path indication AIS, LOC, or BER, and receive circuit is operable to receive management traffic on a path indication degradation or loss of signal). See Fig. 1, and col. 6, lines 41-57.

7. Regarding claims 5, 6, 12, 20, 21 and 28, the AIS is qualifying information that tells the detecting sections and the selector which of VP should be switched through and which should be discarded at the receive circuits. In order for the receive circuits to know which VP should be discarded, the receive circuits must somehow communicate with each other. See Fig. 1, and col. 6, lines 41-57.

8. Regarding claims 7, 15, 22 and 30, Fig. 1 discloses a ring where the path 5-2 travels in a clockwise direction and path 5-3 travels in a counterclockwise direction around the ring (wherein the paths comprise a first in a first direction around a SONET UPSR and a second path in a second direction around the SONET UPSR).

Claims 3, 11, 18, and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Naohiro in view of Bobey et al. in further view of Rubino et al. (US 6,424,629). Claims 3, 11, and 18 are dependent on claims 1, 9 and 16, respectively, so the rejections made to those claims also apply here. Naohiro does not expressly disclose using a keep-alive signal to determine a qualified copy of traffic. Rubino et al. discloses detecting periodic keep-alive messages to indicate that the channel is still active. It would have been obvious to a person of ordinary skill in the art at the time of the invention to add a keep-alive signal into the signal switching that Naohiro discloses. One of ordinary skill in the art would have been motivated to do this because using a keep-alive signal is just another way of detecting the quality of a path and thus determining which signal

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would be more qualified.

Response to Arguments

9. Applicant's arguments with respect to claims 1-23 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Timothy Lee whose telephone number is (703)305-7349. The examiner can normally be reached on M-F, 9-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ricky Ngo can be reached on (703)305-4789. The fax phone numbers for the organization where this application or proceeding is assigned are (703)746-9420 for regular communications and (703)746-9420 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)305-4700.

TLL
March 19, 2003


**RICKY NGO
PRIMARY EXAMINER**